

GOVERNMENT OF INDIA
MINISTRY OF COMMERCE



REPORT OF THE
INDIAN TARIFF BOARD
ON THE
CONTINUANCE OF PROTECTION
TO THE ELECTRIC MOTORS
INDUSTRY

BOMBAY

1949

BY THE MANAGER OF PUBLICATIONS DELHI
THE MANAGER GOVERNMENT OF INDIA PRESS SIMLA 1950

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GOVERNMENT OF INDIA
MINISTRY OF COMMERCE
DRAFT RESOLUTION

TARIFFS

New Delhi, the 4th February, 1950.

No. 11(2)T.B.49.—The existing protective duty of 10 per cent. *ad valorem* on electric motors under item 72(14) of the Import Tariff is due to expire on the 31st March 1950. The Tariff Board has enquired into the case for the continuance of the protection to the indigenous industry and have submitted the following recommendations:

- (1) imposition for a period of three years beginning from the 1st April 1950 of a protective duty of 15 per cent. *ad valorem* on imports of electric motors up to 20 h.p. including fractional horse power, and including component parts thereof, specially designed for the manufacture of such motors, and having been given special shape or and size for the purpose, such as stators and rotors;
- (2) continuance of the present ban on imports of electric steel sheets and stampings; licences for such imports being granted only in exceptional cases, if the required quantity or and design cannot be manufactured within the country;
- (3) restriction of imports into the country of motors up to 15 h.p. until the present stocks of such motors have been exhausted;
- (4) consequential amendment of item 72(14) of the first Schedule to the Indian Customs Tariff;
- (5) Compilation of statistics according to the following classification:—
 - (i) Squirrel cage induction motors 1 to 20 brake-horse-power,
 - (ii) Squirrel cage induction motors 21 to 30 brake-horse-power,
 - (iii) Slip ring motors 15 to 50 brake-horse-power.
 - (iv) Fractional brake-horse-power motors; and
 - (v) all other electric motors not covered by the above.
- (6) Concerted action on the part of Tata Iron & Steel Co., Ltd., and Sankey's Electrical Stampings, Ltd. to reduce the price of electrical sheets to a reasonable level;
- (7) Standardisation of the size and design of laminations in each type of electric motor to be made, and also of windings, shaftings and ball bearings in consultation with the Indian Standards Institutions;

- (8) Reduction of the quantity of iron castings used to the minimum necessary for the efficient functioning of the motors;
- (9) Exploration of the possibility of obtaining castings and copper conductors in the cheapest market; and
- (10) Manufacture of transformers, switch gear pumping sets and similar articles, for which a portion of the same equipment and machinery as is required for electric motors can be utilised.

2. As regards recommendation (1), Government agree that protection should be continued up to the 31st March, 1953. Government do not, however, consider that having regard to all factors at present relevant, including the comparatively limited field of the industry subjected to detailed investigation by the Board, the quantum of protection now enjoyed should be altered immediately. The position will be reviewed from time to time as and when necessary and certainly before the expiry of the period of protection. Recommendations (6) to (10) concern the industry whose attention is drawn to them. Recommendations (2) & (3) will be given due consideration by Government within the frame work of their general import policy. Government accept recommendations (4) and (5).

ORDER

ORDERED that a copy of this Resolution be communicated to all concerned and it be published in the Gazette of India.

C. C. DESAI,

Secretary to the Government of India.

REPORT ON THE CONTINUANCE OF PROTECTION TO THE ELECTRIC MOTORS INDUSTRY

1. Reference to the Board.—The Government of India, Ministry of Commerce, in their letter No. 2-T(2)|49, dated 28th January, 1949, asked the Tariff Board to conduct the necessary inquiries into certain protected industries, electric motors being one of them, in order to determine whether the quantum or nature of protection at present enjoyed by the industries is adequate and suitable. The Board was also asked to submit its recommendations as to any action which might be called for under Section 4(1) of the Indian Tariff Act, 1934.

2. Previous Tariff Board's recommendations and action taken to give effect to them.—(a) The case of the electric motors industry (of 1 to 30 h.p. capacity) was first referred to the Tariff Board for investigation and report by the Government of India, Department of Commerce, in their Resolution No. 218-T(55)|45 dated 13th July, 1946, read with paragraphs 2 and 7 of Resolution No. 218-T(55)|45 dated 3rd November, 1945. The Board submitted its report to Government on 26th May, 1947. Having come to the conclusion that the electric motors industry qualified for the grant of protection, the Board made the following recommendations :—

- “ (1) The present revenue duty of 10 per cent. *ad valorem* on electric motors should be converted into an equivalent protective duty which should remain in force till the end of March, 1950.
- (2) Electric motors are not shown separately in the Sea-Borne Trade Statistics or in the Indian Customs Tariff. In order to watch imports with particular reference to the types of motors made in India, a separate item in the Cust Tariff should be shown as under :—
 - (i) Squirrel cage induction motors 1 to 30 h.p.
 - (ii) Slip ring motors 15 to 50 h.p.
 - (iii) Fractional h.p. motors ; and
 - (iv) All other electric motors not covered by the above.
- (3) The present import restrictions should be withdrawn, as healthy competition from abroad is desirable to maintain and improve the quality of the Indian product.
- (4) Customs duty paid on electric motors manufacturing machinery imported in future should be refunded.”

In their Resolution No. 218-T|B(4)|47 dated 12th April, 1948, the Government of India accepted the first and third recommendations. They also accepted in principle the second recommendation relating to the insertion of a separate item in the Customs Tariff and agreed to give effect to it as early as possible. The Government of India further stated that the fourth recommendation was being separately considered by them along with the general question relating to remission of customs duty on imported industrial machinery.

(b) As a result of further consideration, a new item, namely item 72 (14), was introduced in the Customs Tariff Schedule with effect from 24th

September, 1948, by the Indian Tariff (Amendment) Act, 1948 ; and a protective duty of 10 per cent. was levied on electric motors. As regards the recommendation for showing imports of electric motors separately in the Sea-borne Trade Statistics, it is understood that the Director-General of Commercial Intelligence and Statistics, Calcutta, has instructed the Customs authorities that figures of imports in value only should be separately recorded from January, 1949, in respect of the four categories specified in the Board's recommendation. Government's decision on the recommendation regarding the withdrawal of import restrictions was implemented only in September, 1949, when electric motors of 30 h.p. and below were placed on O.G.Ls. XI and XII, thereby permitting their imports both from sterling and soft currency countries as well as from Sweden and Switzerland. Before September, 1948, a limited number of licences for motors of 1 to 30 h.p. were granted. In December, 1948, O.G.L. No. XII was cancelled but the scope of O.G.L. No. XI, in which electric motors of 30 h.p. and below were included was extended so as to cover imports from Sweden but not imports from Switzerland. As regards the recommendation for remission of customs duty on imported machinery, under the Government of India, Ministry of Finance (Revenue Division), Notification No. 45 Customs, dated 23rd October, 1948, the customs duty leviable on imported industrial machinery was reduced from 10 per cent. to 5 per cent. *ad valorem*. This concession is also applicable to electric motors manufacturing machinery.

(c) Since the reference from Government was in respect of electric motors of 1 to 30 h.p. capacity, the previous Tariff Board confined its investigations to such motors only. Moreover, as squirrel cage induction motors of 1 to 30 h.p. were the types mainly produced in India, it was the Board's intention that its recommendation for the levy of a protective duty of 10 per cent. should apply to such motors and not to the other types which were not produced in the country (*vide* paragraph 16 of the Tariff Board's Report—1947). With a view, however, to maintaining a watch over imports, the Board had suggested that there should be a separate item in the Customs Tariff Schedule consisting of the four categories which covered all electric motors including the types made in India. But in giving effect to the Board's recommendations, the protective duty of 10 per cent. *ad valorem* was shown against all the four categories in the new item 72(14) of the Indian Customs Tariff Schedule, although the question of competition with foreign imports arose only in respect of the first category. This has had the effect, although not intended by the Board, of the protective duty of 10 per cent. being levied also on electric motors of a h.p. and type which are not generally produced in India. Moreover, fractional motors are also included in the protected category, although their case was not specifically investigated by the previous Tariff Board. Electric motors of $\frac{1}{2}$ or higher h.p. would, but for their inclusion in item 72(14) of the Tariff Schedule, be classifiable as 'machinery' and qualify for assessment at the concessional rate of 5 per cent. now levied on machinery under item 72 of the Schedule. Motors of under $\frac{1}{2}$ h.p. would be assessable at the revenue rate of 30 per cent under item 72(6) of the First Schedule to Indian Customs Tariff.

3. Scope of the present inquiry.—(a) As stated in paragraph 1 above, the inquiry was originally instituted with reference to Section 4(1)

of the Indian Tariff Act, 1934. In a letter dated 31st March, 1949, the Ministry of Commerce, drew attention to a complaint that the import duty on certain raw materials, such as enamelled wire and laminated sheets, required for the manufacture of electric motors, was higher than the duty on finished products such as electric motors. Although the previous Tariff Board had expressed the view that there was little substance in the request of the electric motors industry for the removal of this tariff inequality, Government desired the whole question to be re-examined. Again, in a letter dated 12th May, 1949, the Ministry of Commerce, Government of India referred to certain doubts expressed by the Customs authorities in regard to the assessment of fractional h.p. motors and component parts and control gears of all electric motors. It was pointed out that the previous Board's report on the electric motors industry contained no indication as to whether electric motors of fractional h.p. were being manufactured in the country and whether imports of such motors should be subjected to a protective duty. The report also did not indicate whether component parts and control gears of electric motors were manufactured in India and whether these articles required any protection. Government, therefore, invited the Board's views on these points and called for its suggestions for such amendments in the Indian Customs Tariff Schedule as may be found necessary.

(b) Pursuant to these references, the Board decided to examine what tariff inequalities existed in respect of the electric motors industry and to include the case of fractional h.p. motors, i.e., motors of less than 1 h.p., and of component parts and control gears of electric motors within the scope of the present inquiry. Moreover, as the period of protection granted to the electric motors industry is due to expire on 31st March, 1950, it was also considered desirable to examine the whole question of the continuance of protective duties after 31st March, 1950.

4. **Method of inquiry.**—(a) On 10th February, 1949, the Board issued a questionnaire to all known producers of electric motors in the country calling for information about the progress made by the industry, the cost of production of indigenous motors and the difficulties experienced by the industry. Information about the landed costs of comparable types of imported electric motors was obtained from the main importers and the Collectors of Customs. A memorandum on the electric motors industry was furnished to us by the Directorate-General of Industries and Supplies. We also examined the representations made to Government by the Marwari Chamber of Commerce, Calcutta, and the National Electrical Industries Ltd., Bombay. We also obtained information regarding the ruling prices of the important raw materials required for the manufacture of electric motors. On receipt of replies to the Board's questionnaire, discussions were held by us with the representatives of the following concerns and associations :—

- (1) The National Electric Industries, Ltd., Bombay.
- (2) Bharat Bijlee, Ltd., Bombay.
- (3) Kirloskar Electric Co., Ltd., Bangalore.
- (4) Electric Construction and Equipment Co., Ltd., Calcutta.
- (5) Mysore Government Electric Factory, Bangalore.

- (6) Jyoti Ltd., Baroda.
- (7) Engineering Association of India, Calcutta.
- (8) Indian Electrical Manufacturers' Association, Calcutta.
- (9) Crompton Parkinson (Works) Ltd., Bombay.
- (10) Sankey's Electrical Stampings Ltd., Bombay.
- (11) The Tata Iron & Steel Co., Ltd., Tatanagar.
- (12) Volkart Brothers, Bombay.
- (13) Ashok Engineering Co., Bombay.

(b) Mr. M. E. Rahman, Member of the Board, visited the factories of Kirloskar Electric Co., Ltd., and the Mysore Government Electric Factory at Bangalore on 4th August, 1949, and the factories of Bharat Bijlee, Ltd., and the National Electric Industries Ltd., at Bombay on 18th and 19th August, 1949 respectively. The Board's Cost Accounts Officer investigated the costs of production of Bharat Bijlee Ltd., on 21st June, 1949, and those of the National Electrical Industries, Ltd., on 27th June, 1949.

5. **Progress of the industry.**—(a) At the time of the previous Tariff Board inquiry, there were five principal manufacturers of electric motors and five smaller manufacturers, while six new manufacturers were expected to go later into production. Of the five principal manufacturers, both Crompton Parkinson (Works) Ltd., Bombay, and the Associated Electrical Industries Manufacturing Co., Calcutta, have considerably increased their production during the last two years. Kirloskar Brothers Ltd., Kirloskarwadi, on the other hand, practically discontinued production by the end of 1947. During 1948, their equipment and machinery were being transferred from Kirloskarwadi to Bangalore. They have now started a new company by the name of Kirloskar Electric Co., Ltd., whose factory is at Malleswaram Bangalore. This factory commenced production in October, 1948, and was able to manufacture 83 electric motors by the end of the year. Its production has considerably increased this year and up to the end of July, 725 motors of a total h.p. of 3964.5 were produced. The British India Electrical Construction Co., Calcutta, have been occupied with re-organising their Works and there has been no regular production of electric motors in their factory after 1946. P. S. G. & Sons Charity Industrial Institute, Coimbatore, have mentioned their production at practically the same level as in 1946. Of the five smaller manufacturers, the Bharat Bijlee Ltd., Bombay, started production in April, 1947 and have made good progress. Metropole Works, Amritsar, manufactured a small number of fractional h.p. motors. Jyoti Ltd., Baroda, also produced an appreciable number of motors from 1 to 10 h.p. during 1948 but stopped production during January, 1949, owing to accumulation of stock. Nothing is known about the other two small manufacturers whose names appear in Appendix III of the previous Board's report. As for the new manufacturers, the Argus Engineering Co., Coimbatore, started manufacture in 1947 and the National Electrical Industries, Bombay, commenced production in November, 1948. Both these firms

have been able to produce an appreciable number of electric motors. Hindustan General Electric Corporation, Calcutta, have not yet undertaken the manufacture of electric motors but intend to do so in the near future. No information is available as regards the other firms who had declared their intention to manufacture electric motors at the time of the previous Tariff Board's inquiry.

(b) Seven new firms have entered the field since the Board's last inquiry. Of these, the more important ones are the Mysore Government Electric Factory, Bangalore, the General Electric Company of India Ltd., Calcutta, and the Electric Construction and Equipment Co., Ltd., Calcutta. The Mysore Government Electric Factory which has recently undertaken the production of electric motors has a complete modern plant for the manufacture of plain and totally enclosed induction motors of 1 to 15 h.p. while necessary equipment for manufacturing motors of higher h.p. has been ordered and is shortly expected. It is stated that the plant will be a balanced one for a production of 2,000 motors per month, ranging from fractional h.p. to 100 h. p. frame sizes. The firm claims that as soon as work is commenced, production can be stepped up to 500 motors per month during this year. For lack of adequate demand, large-scale production has not so far been attempted. The General Electric Co., stated that they could manufacture 2,200 motors up to 10 h.p. in a year and in fact produced 92 motors in April, 1945. The Electric Construction and Equipment Co., which commenced production in 1947 manufactured 448 motors in 1948. Three of the new firms which are all in West Bengal are engaged in the manufacture of fractional motors only, the number produced by one of them in 1948 being 700 pieces of $\frac{1}{2}$ h.p.

6. Domestic demand.—The previous Tariff Board had estimated the Indian demand to be roughly 5 lakhs h.p. of which 2.1 lakhs h.p. represented motors of 1 to 30 h.p. which are the types produced in the country. In view of the partition of the country, the Indian demand would be slightly less. In our opinion, the present annual requirements of the country for electric motors can be put at 3 lakhs h.p., a little over one lakh of which would represent motors upto 30 h.p. On this basis, the Indian production was a little over 50 per cent. of the demand. The D.G., I & S., have, however, estimated the present Indian demand for electric motors No. 3 phase squirrel cage type 1-30 h.p. to be about 2 lakhs h.p. per annum or 35,000 to 40,000 motors. We consider this estimate to be on the high side as the supply of electric power will be limited until the several hydro-electric schemes are completed. The indigenous production of electric motors has been generally confined to squirrel cage screen protected and totally enclosed types, 3 phase induction motors of 50 cycles, of 400/440 volts and of 1 to 15 h.p. and a small number of motors above 15 h.p. (vide Appendix II).

7. Domestic production.—(a) A statement showing the installed capacity for manufacture of motors of 1 to 30 h.p. and the actual production of such motors during 1949 is given in Appendix I(A). It will be seen that the total production in 1948 was 12,780 motors of a total h.p. of 57,023.5 as against the annual rated capacity of 2,53,400 h.p. as furnished by the manufacturers themselves. On the other hand, the D.G.,

I&S. have furnished the following figures of capacity and production in respect of electric motors :—

Installed capacity	2,00,000 h.p.
Peak production	60,000 h.p. in 1948.
Annual production :—	
1947	38,000 h.p. (8,913 Nos.).
1948	60,000 h.p. (13,964 Nos.).
1949 (for six months January to June).	35,170 h.p. (7,424 Nos.).

(b) The production has expanded considerably since 1947. The Indian manufacturers, however, are mainly interested in the manufacture of motors upto 15 h.p. in respect of which the indigenous industry can reasonably be expected to meet the country's full requirements. Some of the manufacturers are also planning to increase the production of motors of the h.p. and type at present being manufactured and also to manufacture motors of higher h.p. and of types not so far produced in the country. Until these plans materialise, the country will have to depend on imported supplies to meet its needs in respect of electric motors of higher h.p. and of special types required by various industries.

8. **Raw Materials.**—(a) *General.*—As far as the principal raw materials are concerned, the most notable development in recent months is the remarkable increase in the supply of 1 to 1.5 per cent. silicon electrical steel sheets and stampings from indigenous sources. There has been a slight increase in the supply of double cotton cover copper wires and strips from indigenous sources, but the requirements of the electric motors industry of these articles exceed the indigenous production. In regard to ball bearings, the industry continues to depend on imported supplies. Some of the principal manufacturers of electric motors use IVD 50 ton tensile strength special steel rods for motor shafting instead of the ordinary mild steel rods ; but the indigenous manufacturers of the former type of rods are not in a position to meet all the requirements of the electric motors industry. Insulating materials are mostly imported by the industry except possibly black adhesive tapes. As increased cost of raw materials accounts to a large extent for the increase in the cost of production, we have examined the prices at which imported raw materials were available at the time of the previous Tariff Board inquiry and those at which the same are now being obtained by the several indigenous producers. A statement showing these prices will be found in Appendix III.

(b) (1) *Electrical steel sheets and stampings.*—Most of the manufacturers have referred to the high price of electrical steel stampings charged by the only indigenous producer, namely, Sankey Electrical Stamping Ltd., Bhandup (Bombay). The present price of electrical stampings supplied by this firm is Rs. 182 per cwt. f.o.r. Bombay, whereas in 1948 it was Rs. 185 per cwt. Crompton Parkinson (Works) Ltd., Bombay, who also use indigenous stampings in the manufacture of electric motors have, in their statement of cost of raw materials, shown the price of stampings to be Rs. 178 per cwt. We understand that a lower price is charged to

this firm because of the discount allowed by Sankeys on bulk orders. Kirloskars, who recently started their factory at Bangalore, make their own stampings from electrical steel sheets, a large portion of their present requirements of which has been imported by them. The cost at which Kirloskars now import sheets is stated to be Rs. 62-8-0 per cwt. while the previous Tariff Board adopted a price of Rs. 30 per cwt. in its estimate of the fair selling price of motors in 1947—*vide* Appendix IV in the previous Tariff Board's Report. It has been stated by the Electric Construction and Equipment Co. Ltd., Calcutta, that the landed cost of certain stampings imported by them from the U.K. in the early part of this year came to Rs. 143-4-0 per cwt. inclusive of duty and clearing charges. On the other hand, the Associated Electricals have stated that the landed cost of stampings imported by them from the U.K. in 1948 worked out to Rs. 109-12-0 per cwt. It is possible that this firm was able to import stampings at a lower price under special arrangements with the manufacturers in the U.K.

(2) We have discussed the question of the price charged by Sankeys with the firm's representative. Sankeys manufacture motors stampings out of Tata's Lohys and Special Lohys grade Electrical Steel Sheets. Under an agreement with Tatas, the price payable by Sankeys for Tatas electrical steel sheets is based upon the landed costs with duty of similar sheets imported from the U.K. This landed cost includes a surcharge levied by British exporters on the export of electrical steel sheets which are raw materials for the manufacture of stampings. No such surcharge is levied on the export of stampings and consequently, the manufacturer of stampings in the U.K. is able to obtain electrical sheets at a much lower price than Sankeys. As a result of this one factor alone, it is possible to import stampings from the U.K. at a price appreciably lower than that charged by Sankeys. When the price of electrical sheets in the U.K. was increased during 1947, Sankeys also increased their price of stampings from Rs. 163 per cwt. in 1947 to Rs. 185 per cwt. in 1948. Sankeys have also referred to the increase in the cost of labour by approximately 63 per cent. in 1947-48. The firm has further pointed out that its largest buyer is Crompton Parkinsons. As already mentioned, the latter firm is able to obtain stampings from Sankeys at Rs. 4 to Rs. 7 per cwt. less than the other producers because of the large orders placed by it. It has further been represented to us that the width of the steel sheets supplied by Tatas is 30 inches whereas that of imported steel sheets is 36 inches. Moreover, there is a wide disparity in the designs and size required by the various Indian manufacturers, which results in considerable wastage. Sankeys are unable to dispose of vast quantities of waste scrap lying with them. At present there is a large stock of sheets with Tatas and Sankeys which, for want of orders, cannot be converted into stampings. The manufacture of stampings is a specialised process and requires technical knowledge of a high order. For these reasons, Sankeys have pleaded inability to reduce the prices of stampings charged by them unless a reduction is effected in the price of electrical sheets imported by them.

(3) The D.G., I. & S., have advised us that the prices of Tatas' electrical steel sheets suitable for the manufacture of electric motors range from Rs. 35.5 to Rs. 40 per cwt. according to the quality and thickness of

the sheets. These are the prices at which the sheets are supplied to Sankeys and under an arrangement with Tatas already referred to, supplies of sheets to the consumers are only made through Sankeys. Sankeys supply the sheets at the above-mentioned rates to which are added the following charges :—

	Rs.					
Packing 0 10 7 per cwt.
Storage 1 8 0 per cwt.
Sales Tax 0 12 0 per cwt.
				Total	..	.. <u>2 14 7</u> per cwt.

The minimum price to a manufacturer of electric motor in Bombay works out, therefore, to Rs. 38-7-0 per cwt.

(4) The question of the prices of electrical steel sheets has been discussed by us with representatives of the Tatas. They maintain that though their prices are correlated to the landed costs of imports of similar sheets from the U.K., the prices at which electrical sheets have been supplied to Sankeys have, in fact, been lower than the landed costs with duty of corresponding imports from the U.K. The U.K. prices have been increased on three occasions since June 1946, and in view of Tatas' agreement with Sankeys referred to in sub-para (2) above, they could have increased their prices correspondingly. Tatas stated that they increased their prices only once in August 1947. The price of the Special Lohy's grade electrical steel sheet, which is in more general demand was Rs. 722 per ton f.o.r. Wadi Bunder before 8th August, 1947. It was increased to Rs. 734 per ton after that date and this price is still maintained. To this price, Sankeys have to make the following additions before supplying the sheets to the consumer under the latest arrangement with Tatas which we understand has been approved by the D.G., I. & S.

Per ton.

Freight to Sankey Works ; Packing & Storage, *plus*
Sales taxes of Bihar and Bombay Governments Rs. 30

We understand that with the addition of these charges the price f.o.r. Sankeys Works, works out to Rs. 788 per ton. Tatas appreciate the fact that the result of such an arrangement is that the consumer is obtaining indigenous electrical steel sheets at a price higher than the landed cost with duty of similar sheets imported from the U.K. The reason why supplies to the consumers are made only through Sankeys is that the latter alone have the testing and grading equipment. Tatas have not been able to set up their own testing equipment. Some parts of the equipment ordered by them for this purpose have not yet arrived. They hope that by the end of the year, they will be able to complete the necessary arrangements for testing after which they would be in a position to supply tested electrical steel sheets directly to the consumers if orders for sufficiently large quantities at a time are placed with them. They are, no doubt, averse to supply untested sheets. When necessary arrangements for the testing of the sheets at Calcutta either by Tatas or by Sankeys have been made, the ultimate cost to the consumer will be appreciably reduced. There has recently been marked fall in the demand of electrical steel

sheets as a result of which Tatas have had to reduce their production. Their present production capacity is about 2,800 tons of electrical sheets per annum. Whereas in 1947-48 they supplied 3,116 tons of electrical sheets to Sankeys, the latter purchased only 1,809 tons in 1948-49. In view of this, Tatas have expressed their inability to make any immediate reduction in the price of sheets. But, as a result of our discussion with them and in view of the imperative need of the electric motors industry to obtain this important raw material at the lowest possible price, Tatas have agreed to reduce their price of electrical steel sheets required for electric motors upto 30 h.p. by Rs. 24 per ton with effect from 1st January, 1950. The price of Special Lohys grade sheets will thus be Rs. 710 per ton from that date instead of Rs. 734 per ton which is the present price. Tatas have further assured us that as soon as the demand increases substantially and their output reaches the previous figure of 3,000 tons per annum, they will explore the possibility of a further reduction in prices.

(5) While we appreciate the helpful attitude and response of Tatas, we cannot subscribe to an arrangement whereby the price of an important raw material is fixed with reference to the landed cost of imports of such material instead of on indigenous costs of production. In our opinion, if the prices of electrical steel sheets were based on Tatas' costs of production, with a reasonable margin of profit, they would be appreciably lower than the landed costs of corresponding imports. Most of the electrical motors manufacturers are unable to make their own stampings ; and from the industry's point of view, it is important that the price of stampings made and supplied by Sankeys should be appreciably reduced. The reduction of Rs. 24 per ton in the price of sheets will result in a reduction of about Rs. 3.6 per cwt. in the price of stampings, because approximately three tons of sheets are required to make one ton of stampings. The effect of this reduction on the cost of production of electric motors will, therefore, be negligible. Notwithstanding the various difficulties pointed out by Tatas and Sankeys, we consider that there is scope for further reduction in the price of sheets and of stampings and we trust that both these concerns will take concerted action to effect such a reduction.

(6) Imports of dynamo grade electrical steel sheets or stampings suitable for the manufacture of electric motors are not allowed from any country at present ; the indigenous production together with imported stocks of these sheets and stampings are stated to be adequate for meeting the entire requirements of the electric motors industry. It has been suggested that as the local prices of stampings are high, manufacturers of electric motors should be permitted freely to import stampings from the U.K. We do not agree with this suggestion as we are of the opinion that the electric motors industry should, as far as possible, make use of all raw materials available in the country. Moreover, Indian manufacturers of electric motors will not find it possible to import stampings from abroad at an economical price owing to the lack of a standard design. Foreign makers may not also be attracted by small orders of stampings from India for different designs. In our opinion, the indigenous manufacturers of stampings deserve to be encouraged. The production capacity of Sankeys' plant is 125 tons per month, but at present they produce only

about 50 tons owing to lack of orders. They are also planning to set up a factory at Calcutta for supply of stampings in that area. We, therefore, consider that, in order to encourage the indigenous production of electrical sheets and stampings and to place all the indigenous manufacturers of electric motors on an equal footing as regards the supply of raw materials, the present ban on imports should be continued. Licences to import stampings from abroad should be granted only in exceptional cases where the required quantity and/or design cannot be manufactured locally. In view of the country's present foreign exchange difficulties, the exercise of such control has become all the more necessary.

(7) As already pointed out, there is no uniformity in the size and design of laminations adopted by the several manufacturers for motors of the same type and h.p. We recognise that speciality in design is an important feature of this industry. Nevertheless, we believe that, so far as stampings are concerned, it will be in the interest of the Indian industry for all local manufacturers to examine the possibility of standardising the size and design of laminations for each type of electric motor to be made. If the industry were then to place a combined order for stampings on behalf of a number of manufacturers, we believe that Sankeys will be in a position to comply with such an order within a reasonable time and at reduced prices. We also consider that standardisation of design in respect of stampings, windings, shaftings, and ball bearings will further reduce the costs of production. We recommend that the various units in the industry should collectively take up the matter with the Indian Standards Institution which, we understand, is at present engaged in laying down certain standards for the performance of electric motors.

(c) *Grey iron castings*.—This constitutes another important element in the cost of production of electric motors. There has been a considerable increase in the price of this material since 1947. It will be noticed from the figures given in statement in Appendix III that the three firms in West Bengal, namely, the Associated Electricals, the G.E.C. and the G.B. Works, obtain their castings at much lower prices than firms in Bombay. We understand that the availability of pig iron at lower prices in the Calcutta area accounts for the lower cost of castings in that area. The price of Rs. 76-7-0 per cwt. paid by the National Electrical Industries, Bombay, is high. Bharat Bijlee obtain their castings at Rs. 56 per cwt. while Crompton Parkinsons have been paying Rs. 51 per cwt. The National Electricals contend that the cost of the castings used by them is high because of their superior finish and quality which also tend to reduce the quantity required for each motor. Though there is some force in this contention, we are of the opinion that the Indian firms should explore the possibility of obtaining castings at cheaper prices, since castings account for an appreciable part of the cost of production of electric motors. We also recommend that indigenous manufacturers should consider the desirability of reducing the quantity of castings used to the minimum necessary for the efficient functioning of the motors.

(d) *D.C.C. copper wire*.—There has been a slight increase in the price of this material since 1947. Both Bharat Bijlee and National Electricals are paying Rs. 3 per lb. for this wire, while Crompton Parkinsons pay a price which ranges between Rs. 2-7-0 to Rs. 3-3-9 per lb.

(e) *Enamelled copper wire*.—Only one or two firms use this kind of wire instead of D.C.C. wire in the windings of electric motors. Information supplied by the D.G., I. & S., shows that there has been a drop in the price of enamelled copper wire since 1947.

(f) *Copper conductors*.—The price now quoted for these is twice as much as that adopted by the Board in its estimates for 1947 in respect of Kirloskars' cost of production. Here again the cost of production of the National Electricals is higher than that of Bharat Bijlee. The disparity in the prices of this material also suggests the need for the producers to obtain their requirements in the cheapest market.

(g) *M.S. parts*.—There has been a substantial reduction in price since 1947.

(h) *Other raw materials*.—The cost of the other raw materials constitutes only a small portion of the cost of production. The price of ball bearings which are always imported is appreciably lower than what it was in 1947. Thinner and insulating varnish are also imported but the other materials are available locally.

9. **Imports and import control**.—(a) As stated in paragraph 2, before 4th September, 1948, licences for imports from all countries of electric motors of above 30 h.p. were freely granted, the issue of licences being limited in respect of electric motors of 1 to 30 h.p. The O.G.L. under which imports of the latter class of motors were being freely permitted from 4th September, 1948, from sterling and soft currency countries was cancelled with effect from 1st April, 1949, in respect of imports from Japan and from 5th May, 1949, in respect of imports from other countries. Electric motors of 1 to 30 h.p. have not been included in the revised O.G.L. XV and XVI and for imports from Japan and dollar and hard currency areas no licenses have been or are to be granted for motors up to 30 h.p. Imports of motors above 30 h.p. were being allowed freely up to June, 1949. Subsequently, it was decided that licences for imports of such motors should be issued when the authorities were satisfied that the motors were required for industries using electric motors. For the period July-December 1949, licences for the import of electric motors up to 30 p.h. from Western Zone of Germany, Switzerland and soft currency countries will be issued only in accordance with the Trade Agreements entered into by the Government of India with any foreign country ; no import licences will be issued in respect of dollar countries.

(b) The following table shows the total value of imports of electric motors from 1945-46 :

Year				Value of imports in lakhs of rupees.
1945-46	..	..	..	69.73
1946-47	..	..	..	95.78
1947-48	..	..	..	176.59
1948-49	..	..	..	314.34

These figures exclude imports into Pakistan from 1st March, 1948. Figures of imports by country of origin are not available, but it would be safe to assume that the bulk of these imports came from the U.K. In

the last prewar year, namely 1938-39, the total imports of electric motors into India from all countries were of the value of Rs. 63.12 lakhs only. After making an allowance for a substantial increase in the domestic demand owing to increased industrial activity and the progress of hydro-electric schemes as well as the increase in the price levels, we consider that the quantity of imports since 1946-47 is on the high side. Imports during the year 1948-49 were particularly heavy when we take into account the fact that the figure of Rs. 314.34 lakhs relates to the Indian Union only.

(c) No information is available as to the number or value of the squirrel cage induction type motors of 1 to 30 h.p. which may have been included in the figures shown in the above table. It is understood that separate statistics in respect of the four categories specified in item 72(14) of the First Schedule to the Customs Tariff are being recorded by the Customs authorities only from January, 1949. The figures supplied by the Collector of Customs, Calcutta, show that during the period from 1st January, 1949, to 19th February, 1949, the value of imports of motors falling under the first category (i.e., of 1 to 30 h.p.) at that port alone was Rs. 5,29,523. The imports were mostly from the U.K. The figures supplied by the Collector of Customs, Bombay, show that during January, 1949, 987 squirrel cage type induction motors of 1 to 30 h.p. of the value of Rs. 4,69,758 were imported at Bombay. Of these, 703 motors, valued at Rs. 3,42,212, came from the U.K. No information has been furnished by the Collector of Customs, Madras, regarding recent imports at that port of this class of motors. But the figures relating to the value of total imports in 1948-49 and the recent imports at Bombay and Calcutta of motors of 1 to 30 h.p. which we have mentioned above go to show that there are large stocks of imported motors of the types which compete keenly with the indigenous motors. The demand for electric motors has fallen off because of inadequate supply of electric power and, consequently, both the importers and the producers are finding it difficult to dispose of their stocks. The lag in the demand has led to a reduction in the selling prices of imported motors, thus placing the indigenous industry in a more difficult position. In view of these new factors and the fact that the indigenous industry can meet the entire requirements of the country in respect of motors of 1 to 15 h.p., we are of the opinion that imports of this category of motors should be restricted until the present stocks are disposed of. We do not, however, consider that imports of motors of above 15 h.p. should be restricted, as the Indian production of such motors can meet only a portion of the domestic demand for such motors. Moreover, a certain amount of competition with imports is necessary in order to maintain and improve the quality of the Indian product.

(d) The Marwari Chamber of Commerce has stated that imported meters marked "50°C temperature rise" are unsuitable for use in India. Similar complaints have been made by some manufacturers of electric motors and it has been suggested that the import of such motors should be prohibited. We have ascertained that some Continental makes of motors are manufactured to allow a temperature rise up to 50°C ; but if they are unsuitable for use in India, there is no reason why they should find a market in the country. We do not, therefore, consider that any action is necessary on the suggestion that imports of all motors of foreign make designed for a temperature rise above 40°C should be banned.

10. Board's estimate of cost of production.—(a) The previous Tariff Board based its recommendation regarding the quantum of protection to be granted to the industry on the cost data supplied by Kirloskar Bros. in respect of their factory at Kirloskarwadi. Though Kirloskars have established another factory at Bangalore, it has not yet attained normal production. We, therefore, thought that the cost data of Kirloskars would not be representative and selected the factories of Bharat Bijlee and the National Electric Industries for the purpose of cost investigation. The costs of 3 h.p. (S.P.), 5 h.p. (S.P.) and 7.5 h.p. (T.E.) motors manufactured by Bharat Bijlee were examined. In the case of the National Electrical Industries, the cost of production of 3 h.p. (S.P.) motors only were examined as the bulk of the production of this firm consists of this type. Besides computing the costs of production on the basis of actual output, the Board has also made estimates of future costs on the basis of the maximum productive capacity of each factory. The period January/July 1948 was taken for the purpose of estimating the costs on the basis of actual output. From these costs, we have estimated the future ex-works costs. Since the manufacturers have asked us to keep the cost data confidential, the Cost Accounts Officer's report is being submitted separately to Government.

Details regarding the estimated fair selling prices for 1949 of both these factories are sent separately.*

(b) *Raw materials.*—The quantities of raw materials inclusive of reasonable wastages, required for the manufacture of electric motors have been determined by us from available data in consultation with the Board's Technical Adviser.

(c) *Labour.*—The factory of Bharat Bijlee works one shift of 8 hours, and labour is paid on a daily rated basis. Labour employed in the factory of the National Electrical Industries is also remunerated on a daily rated basis. In the case of the latter factory, the wages paid to labour are on the high side. The labour cost for each motor has been estimated in consultation with the Board's Technical Adviser based on the man-hours required in each manufacturing department such as machining, fitting, winding and assembling, multiplied by the actual man-hour rates obtained for the costing period. As no bonus has been paid to the workers or staff of either factory, no provision for this item has been made in the costs calculated.

(d) *Repairs, maintenance and consumable stores.*—In the absence of records showing separately the actual consumption under these heads, their costs have been estimated in consultation with the firms concerned.

(e) *Power and fuel.*—Electricity is the main source of power used in the manufacture, but coal is used in the seasoning of castings.

(f) *Depreciation.*—This is allowed at the same rates as adopted by the Income Tax Authorities. As the National Electrical Industries are also engaged in the manufacture of transformers, the depreciation calculated on the above basis has been apportioned between the motor section

*Not printed.

and the transformer section in the ratio of 2 : 1. The proportion of depreciation chargeable to the motor section has then been divided by the number of motors manufactured to arrive at the cost per unit under this head. Bharat Bijlee claimed total depreciation allowable both under general depreciation and for initial depreciation on the plea that such special concessions were being granted by the Income Tax Authorities. We have, however, allowed only normal depreciation.

(g) *Advertisement, packing charges and selling expenses.*—The actual amount spent for advertisement has been taken into account in the case of Bharat Bijlee. The advertisement cost of National Electrical Industries was considered high and we, therefore, decided to spread it over 600 motors being the optimum output per month. The firm has agreed to the costs being calculated on this basis. Packing charges represent the cost of wooden cases made in the factories. Both firms sell electric motors through agents, who are paid a commission on the list prices. We have, however, disallowed this commission in calculating the fair selling prices.

(h) *Interest on working capital.*—In calculating the cost for 1949, we have allowed interest at the rate of 4 per cent. on 3 months' cost of production per annum on the basis of an output of 200 motors per month in the case of Bharat Bijlee and that of 600 motors per month in the case of National Electrical Industries. This is considered reasonable as, in the case of both the firms, the turnover is expected to be larger during 1949 than it was in the previous year.

(i) *Return on block.*—This has been allowed at the rate of 10 per cent. on the original value of all assets usefully employed in the manufacture of electric motors.

(j) In this connection, we must point out, that the two non-Indian manufacturers, namely, Crompton Parkinson (Works), Bombay, and the Associated Electrical Industries Manufacturing Co., Calcutta, which between them are responsible for over 70 per cent. of the total indigenous production, expressed their inability to furnish to us details of their costs of production on the ground that their factories were manufacturing many other items of machinery besides electric motors and had a common machine shop handling works of all the departments of the factory, and that, consequently, it was not possible for them to provide separate information regarding the manufacture of certain sizes and types of electric motors only. The Board thereupon requested Crompton Parkinsons either to permit the Board's Cost Accounts Officer to visit their factory with a view to examining the cost of production of electric motors or, if this course was not convenient to them, to furnish information regarding the quantities of the raw materials used by them in the manufacture of each type of electric motors. The Company did not, however, see its way to accede to either of these requests. It may be recalled that in paragraph 3 of its report, the previous Tariff Board was constrained to comment on the unhelpful attitude of these non-Indian firms. In view of the remarks made therein and the fact that the benefits of protection have been enjoyed by them equally with the other producers, we expected that these concerns which manufacture important articles of machinery in the country, would have evinced a spirit of co-operation. As they are well-established and

the largest units of the electric motors industry in the country, information relating to their costs of production would have been of considerable assistance to the Board. In the absence of such a co-operative attitude, the Board had to formulate its conclusions on the basis of the costs of production of the factories of Bharat Bijlee and the National Electrical Industries.

11. Board's estimate of fair selling prices.—The following table shows the fair selling prices of 3 h.p., 5 h.p., and 7.5 h.p., motors as estimated by the previous Tariff Board in 1947 on the basis of the expected production of Kirloskars, and those estimated by us for motors of similar types produced and to be produced by Bharat Bijlee and the National Electrical Industries.

	3 h.p. (S.P.)	5 h.p. (S.P.)	7.5 h.p.
	Rs.	Rs.	Rs.
(1) As estimated by the previous Tariff Board in 1947 for Kirloskar Bros. Ltd., Kirloskarwadi.	157 7 10	187 9 10	239 13 9
(2) As estimated by the present Board for Bharat Bijlee Ltd., Bombay.—			
(a) On the basis of actual production ..	285 5 0	317 10 1	455 15 4 (T.E. Type)
(b) On the basis of production to full capacity	249 9 4	281 9 5	411 15 7 (T.E. Type)
(3) As estimated by the present Board for National Electrical Industries, Ltd., Bombay.—			
(a) On the basis of actual production ..	290 9 8	..	..
(b) On the basis of production to full capacity	243 3 3	..	..

It will be observed from the above table that the cost of production has increased considerably since 1947. We have given the figures for motors of 3 h.p., 5 h.p., and 7.5 h.p., only, as these are representative of the motors manufactured by the two firms whose cost data have been investigated by us.

12. C.I.F. Prices and landed costs.—A statement showing the c.i.f. prices and landed costs of imported electric motors of such types as can be comparable with those produced by the indigenous manufacturers, furnished by the principal importers and Collectors of Customs, is given in Appendix IV.

13. Comparison of the Board's estimate of fair selling prices of indigenous electric motors with landed costs, ex-duty, of imported motors.—The following table provides a comparison of the fair selling prices of indigenous motors as estimated by us and the landed costs of imported motors. For the purpose of this comparison, we have taken the lowest landed cost of recent imports of comparable types and the fair selling prices of National Electrical Industries in the case of 3 h.p. motors on

the basis of production upto full capacity and that of Bharat Bijles in the case of 5 h.p. motors, again on the basis of maximum production :—

Squirrel Cage-Induction type. 440 Volts, 4 Poles, 50 cycles, 1440 or near about RPM, Screen Protected Motors.

					3 h.p.	5 h.p.
(1) C. i. f. price	..	..	..	..	208 0 0	256 0 0
(2) Landing charges	..	..	..	..	1 13 1	2 3 10
(3) Landed Cost	..	..	..	..	209 13 1	258 3 10
(4) Customs duty 10 % on (3) above	..	..	..	..	20 15 8	25 13 2
(5) Clearing charges $\frac{1}{2}$ per cent on landed cost (3)	..	..	..	..	1 0 9	1 4 8
(6) Total landed cost including the duty	..	..	..	..	231 13 6	285 5 8
(7) Total landed cost without duty	..	..	..	..	210 13 10	259 8 6
(8) Board's estimate of the fair selling price	..	..	..	..	243 3 3	281 9 5
(9) Difference between fair selling price and total landed cost without duty.					32 5 5	20 0 11
(10) Difference as percentage of landed cost				$\frac{(9) \times 100}{3}$	15.41%	8.54%

Although the cost data in respect of the T.E. Type of 7.5 h.p. motors produced by Bharat Bijlee have also been examined by us, we have been unable to obtain a comparative c.i.f. price of this type. We consider that the Squirrel cage screen protected type motors of 3 h.p. and 5 h.p. can be reasonably regarded as representative of the indigenous industry as a whole.

14. Proposed measure of protection.—(a) It will be seen from the above comparison that though the existing protective duty of 10 per cent. is adequate in the case of 5 h.p. motors, it does not afford sufficient protection to the 3 h.p. motors. The statement in Appendix II shows that the bulk of the Indian production consists of motors upto 3 h.p. though the number of 5 h.p. motors produced is also appreciable. The comparison that we have made above is only in respect of two classes of motors and does not cover the entire range of electric motors produced in India.

(b) We consider that, having regard to the relative quantities of the main raw materials required for the production of motors of 1 and 2 h.p., it will be reasonable if the percentage of duty necessary to give adequate protection to such motors is not less than that necessary in the case of motors of 3 h.p. We are also advised that 3 h.p. motors can, easily be replaced by 5 h.p. motors and that if the quantum of protection were determined on a cost price examination of the latter, the indigenous production of 3 h.p. motors for which there is a large demand will be adversely affected. As we have already stated we have adopted the lowest fair selling price on the basis of the maximum possible production of the factory concerned having regard to its installed capacity. We consider

however, that it may not be possible for the Indian manufacturers to increase their production upto their maximum capacity for some time to come, particularly in view of the existing heavy stocks of imported motors in the country and the fall in demand caused by the general shortage of electric power. The quantum of protection required by the Indian Industry on the basis of the lowest present costs of production will be much greater than that determined on the basis of production upto the full installed capacity as will be seen from the following comparison of the relative fair selling prices and landed costs :-

	3 h.p.	5 h.p.
	Rs.	Rs.
(a) Total landed cost of imported motors (item 7 in the table in para 13).	210 13 10	259 8 6
(b) Fair selling prices on basis of actual production in 1948 (item 2 (a) in the table in para 13).	285 5 0	317 10 1
(c) Difference between (b) and (a)	74 7 2	58 1 7
(d) Difference as percentage of landed cost (item 3 in the table in para. 13).	25.48%	22.50%

(c) It is possible that the costs of production of the two non-Indian concerns, *viz.*, Associated Electrical Industries and Crompton Parkinsons are, substantially lower than those of other producers ; and this is probably the reason why these firms have made no representation for any increase in the quantum of protection already enjoyed by the Indian industry. These firms manufacture not only motors but also other articles such as transformers, switch gear, and pumping sets, and, consequently, their overhead expenses must be low. It may be to the advantage of the other Indian manufacturers also to undertake the production of these other articles for which presumably a portion of the same equipment and machinery as is required for electric motors can be utilised and the overheads thus kept down. It may be pointed out that the National Electrical Industries have also commenced manufacture of transformers and are actively considering a scheme for the expansion of their activities. Until the Indian section of the industry reaches the same level of efficiency of production as that of the two British firms, resulting in an appreciable reduction in costs, the industry requires to be protected, so that production of electric motors is not undertaken by only one or two big firms which have a long-standing reputation in this field.

(d) We consider, however, that it will impose an unduly heavy burden on the consumer if the rates of protective duties on electric motors are based on the present cost of production with a low turnover of the two manufacturers. The quantum of protection required by the industry in future should be based on the lowest fair selling prices of motors of 3 h.p. taking into account the full installed capacity of the factory concerned. This will provide the necessary incentive to the indigenous manufacturers for improving their efficiency and thus reducing their costs of production.

(e) As has already been pointed out, indigenous production is mostly confined to motors upto 15 h.p. for which there appears to be a regular demand. It is possible, however, that imported motors of 15-20 h.p. may compete with indigenous motors of 15 h.p. We, therefore, recommend that the existing protective duty on motors of 1 to 20 h.p. should be raised

from 10 per cent to 15 per cent. *ad valorem*. We further recommend that motors of above 20 h.p. should not be subject to a protective duty and should be assessable to a revenue duty at the rate of 5 per cent. applicable to machinery.

15. **Fractional motors**.—It will be seen from the statement in Appendix II that 1,532 fractional motors were produced in the country in 1948. Nine manufacturers are engaged in the production of such motors. A statement showing the names of the manufacturers and the actual production during the period 1947-1949 is given in Appendix I(B). We have not been able to estimate the demand for such motors separately, nor could we obtain any reliable information regarding their costs of production and the landed costs of comparable imported motors. We could not, therefore, determine the extent of competition suffered by the producers of these motors. But in order to encourage the manufacture of fractional motors in the country, we recommend that the same protective duty be levied on such motors as has been recommended by us in respect of motors of 1 to 20 h.p., namely at the rate of 15 per cent. *ad valorem*.

16. **Parts of motors**.—It is possible that some importers may attempt to circumvent the protective duty that we have recommended in respect of motors upto 20 h.p. by importing component parts thereof at the lower duty leviable on machinery and assemble them into complete motors. We, therefore, recommend that component parts of such electric motors should be subjected to the same protective duty as complete motors themselves, i.e. 15 per cent. *ad valorem*. The "component parts" that we mention should include only such parts as are specially designed for the manufacture of motors of a h.p. not exceeding 20 and have been given a special shape or size for the purpose, such as stators and rotors.

17. **Control gear of electric motors**.—With the exception of the two British-owned concerns and the Mysore Government Electric factory which make small quantities of switch gear, no indigenous manufacturer is engaged in making control gear for electric motors on a commercial scale. The question of considering the grant of protection to such articles, therefore, does not arise.

18. **Proposed Tariff Item**.—The present item 72(14) of the First Schedule to the Indian Customs Tariff under which electric motors are assessable to a protective duty of 10 per cent. *ad valorem* is re-produced below :—

Item No.	Name of Article.	Nature of duty	Standard rate of duty.
72 (14)	Electric Motors :— (i) Squirrel cage induction motors 1 to 30 brake-horse-power. (ii) Slip ring motors 15 to 50 brake-horse-power ; (iii) fractional brake-horse-power motors and (iv) all other electric motors not covered by the above.	Protective	10 per cent <i>ad valorem</i> .

If the recommendations made by us in paragraphs 13 to 17 are accepted by Government, the above item should be substituted by the following :—

Item No.	Name of article.	Nature of duty	Standard rate of duty.
72(1)	The following electric motors and parts thereof but excluding control gear for the same namely :— Squirrel cage induction motors of a brake-horse-power not exceeding 20 including fractional brake-horse-power.	Protective	15 per cent ad val. rem.

19. **Extension of the period of protection.**—As already pointed out, the existing protection is due to expire on 31st March, 1950. The indigenous industry is still in its infancy and will continue to require protection for some years to come. We recommend that the protective duty at the level proposed by us should be continued in respect of motors upto 20 h.p. for a period of three years beginning from 1st April, 1950.

20. **Collection of information for statistical purposes.**—Although the protective duty which we have recommended is to apply to electric motors upto 20 h.p. only, we consider that in order to watch the nature and extent of foreign competition it is necessary that detailed information regarding the value and number of imported electric motors of the following types should be collected and published in the accounts relating to the Sea-Borne Trade and Navigation of India :—

- (1) Squirrel cage induction motors 1 to 20 brake-horse-power.
- (2) Squirrel cage induction motors 21 to 30 brake-horse-power.
- (3) Slip ring motors 15 to 50 brake-horse-power.
- (4) Fractional brake-horse-power motors ; and
- (5) all other electric motors not covered by the above.

The information regarding items (3) to (5) above is already being compiled by the Custom authorities. Our present recommendation regarding protection makes it necessary that details of imports of motors of 1 to 30 h.p. should in future be split up into two headings as shown in items 1 and 2 above.

21. **Other assistance asked for by the industry.**—(a) The Marwari Chamber of Commerce, Calcutta, has, in its letter No. CG-4501/48 dated 30th November, 1948, stated that the quantum of protection at present granted to the industry is inadequate for the following reasons :—

- (i) The market has been flooded with foreign motors marked 50°C temperature rise though the British Standard Specification 168 of 1936 specifies the maximum temperature rise as 40°C and even that is considered too high during the hottest seasons in India.

- (ii) Though the quality of the Indian motors is as good as that of those of foreign manufacture the consumer prefers to buy the latter in view of their availability at lower prices and this unfair competition will drive the Indian manufacturer out of the market and will result in the Indian industry being killed.
- (iii) The prices of the main raw materials used in the manufacture of electric motors and the cost of labour have increased to such an extent that the conclusions of the (previous) Tariff Board about the cost of production in India being lower than the landed cost without duty does not hold good any longer ; the local costs have become definitely higher than the landed costs of imported motors even with the 10 per cent. duty on them.
- (iv) The import duty on raw materials which have to be imported from abroad is heavy and moreover foreign suppliers who operate on a ring basis accept order for delivery as and when available. The period of delivery ranges from 12 to 16 months, thus putting the indigenous manufacturer to great inconvenience.
- (v) The evidence on which the previous Tariff Board based its conclusions was mainly obtained from firms in India which are both managed and financed by foreigners who have close connections with combines which control the supply of the main raw materials from foreign countries. These firms were interested in giving such evidence as would induce Government to encourage foreign imports.

(b) The chamber has requested that, if it is not possible for Government to enhance the rate of duty on foreign motors, they should at least revert to their former policy of prohibiting or restricting their imports.

(c) The National Electrical Industries have, in a note submitted to the Board, and in several representations made to the Ministry of Commerce, complained against Government's policy of allowing imports of electric motors both from soft currency and as well as hard currency areas. They have also referred to the fact that a large number of motors imported from Czechoslovakia and other Continental countries do not conform to the British standard specifications and are being sold at cheap prices because of their poor quality. As the Indian productive capacity is 2,40,000 h.p. per annum in motors of horse power ranging from 1 to 30, with the possibility of expansion and as the quality of Indian motors is satisfactory, they have suggested that electrical motors of the above horse powers should not be allowed to be imported into the country. They have also contended that the indigenous industry suffers from a special disadvantage in that the import duty on raw materials required for the manufacture of electric motors is high as compared to the duty levied on imported electric motors. They have requested that this tariff inequality should be rectified. This request has been supported by the Indian Electrical Manufacturers' Association, Calcutta which, in a letter to the Ministry of Commerce dated 20th April, 1949, has pleaded for the removal of or reduction in the import

duty leviable on the essential raw materials consumed by the electrical industries in the country. The National Electrical Industries have further pointed out that the price of silicon steel sheets supplied by Sankeys is high and that the wastage in their use is as much as 66 per cent. This single factor is responsible to a large extent for the increased cost of production.

(d) Similar representations have also been received from the Argus Engineering Co., Bharat Bijlee, Kirloskar Electric Co., and the Electric Construction and Equipment Co., referring to the increase in the cost of production and stressing the need for restricting the imports of electric motors from foreign countries. It should be pointed out that the two non-Indian concerns, namely, Crompton Parkinson (Works) and the Associated Electrical Engineering Co., have made no complaints against foreign competition ; nor have they asked for any special assistance.

(e) Before proceeding to examine the request for other assistance asked for by the industry, we consider it necessary to deal with the statement made by the Marwari Chamber of Commerce that the previous Tariff Board relied on the evidence of firms financed by foreigners who were connected with combines which control the supply of raw materials from foreign countries. This statement is not correct, because, as we have already pointed out in paragraph 10(a) above, the conclusions and recommendations of the previous Tariff Board were based on the cost data furnished by Kirloskars and not on the information given by any non-Indian firms. The c.i.f. prices taken for the purpose of comparison with the fair selling prices of electric motors manufactured by Kirloskars were those supplied by three principal importers (all British firms) and were, on an average, lower than those reported by the Collectors of Customs, Bombay and Madras, vide Appendix VI to the previous Tariff Board's Report.

(f) Most of the other grounds on which the Marwari Chamber of Commerce and Messrs. National Electrical Industries Ltd., and certain other producers asked for revision of the quantum of protection have already been dealt with by us. It remains to consider whether there is any substance in the complaint that the import duty on certain raw materials required for the manufacture of electric motors is high as compared with the duty on motors. The demand for a rectification of tariff inequalities was also made before the previous Tariff Board, but the Board found that there was hardly any inequality which it was necessary to remove. Further, our present recommendation for the imposition of a duty of 15 per cent. as against the existing duty of 10 per cent. on motors upto 20 h.p., will reduce the tariff inequality, if any, in respect of most of the raw materials. As we have also recommended restriction of imports of electrical steel sheets and stampings, it is unnecessary to consider the question of tariff inequality, if any, in respect of these materials. Of the other raw materials that have to be imported, the case of ball bearings, copper ingots and DCC copper wire has been discussed in para. 15 (ii) of the previous Tariff Board's Report and we agree that, for the reasons given therein, there is no justification for a reduction in the duty on these items. The quantity of leatheroid, thinner and insulating varnish used by the electric motors industry is small, and the incidence of their costs in the total cost

of electric motors should be negligible ; a reduction of duty on these materials is, therefore, not called for. The National Electrical Industries have furnished us with a statement (Appendix V) showing the reduction that could be effected in the cost of production of electric motors if the customs duty on raw materials was reduced to 5 per cent. It will be seen from this statement that, assuming that the duty is reduced to 5 per cent. on all raw materials including silicon steel laminations, the reduction in the total cost of production of an electric motor of 3 h.p. works out to Rs. 14-9-11 or 5.3 per cent. The firm has urged that, as enamelled wire which is used by it in preference to DCC wire constitutes an important item among imported raw materials, some relief in customs duty should be granted to it in respect of such wire, to enable the firm to reduce the cost of production of electric motors. It will, however, be seen from the statement in Appendix V that, if the duty on insulating wire was reduced to 5 per cent., the reduction in the total cost of production would be only Rs. 6-9-0 or 2.38 per cent. Apart from this negligible reduction in the cost of electric motors, this type of enamelled wire is used for other industrial purposes and it would be administratively impracticable to allow a refund of a part of the duty on the quantities of wire consumed by the manufacturers of electric motors up to 20 h.p. We, therefore, consider that there is no necessity to reduce the existing rates of duties on imported raw materials required in the manufacture of electric motors.

(g) Bharat Bijlee has, in a letter dated July 26, 1949 pointed out that, in view of the lack of demand and the accumulation of stocks, the Indian manufacturers are suffering great losses and that it will be impossible for the Indian industry to survive during the next two years under these adverse circumstances unless it is adequately subsidised by Government with immediate, if not retrospective, effect. The firm has, therefore, requested that the Board may determine an adequate subsidy and recommend the same to Government. This is the only application that we have received specifically asking for subsidy. The industry has been to a certain extent experiencing difficulties because of the heavy imports of cheap motors and the fall in demand due to shortage of electric power for new industrial connections. We have, therefore, recommended the imposition of a higher duty on motors in which the Indian producer is chiefly interested and the continuance of restrictions on such imports. We have also suggested the means by which a reduction in the cost of important raw materials can be brought about. We consider that these measures should result in affording adequate protection to the industry. We are, therefore, not in favour of granting any subsidy.

22. Summary of conclusions and recommendations.—Our conclusions and recommendations may be summarised as under :—

(1) The previous Tariff Board recommended protection in respect of motors of 1 to 30 h.p., but the protective duty of 10 per cent. was extended by Government to all electric motors. [Paragraph 2(e)]

(2) The scope of the inquiry is confined to electric motors up to 30 h.p. capacity, including fractional motors, as well as to their component parts and control gears. [Paragraph 3]

(3) The present annual requirements of the country for electric motors can be put at 3 lakhs h.p., a little over one lakh of which would represent motors up to 30 h.p. [Paragraph 6].

(4) The indigenous production has expanded considerably since 1947. The installed capacity of the industry is now over two lakhs h.p. in motors up to 30 h.p. The industry has mainly interested itself in the manufacture of motors up to 15 h.p. in respect of which it may reasonably be expected to meet the country's full requirements. [Paragraph 7].

(5) In recent months, there has been a considerable increase in the cost of raw materials which accounts for the increased costs of production of Indian motors. Tata Iron and Steel Company have agreed to reduce the price of electrical sheets required for the manufacture of electric motors by Rs. 24 per ton from 1st January, 1950. They have also agreed to consider a further reduction in price as soon as their output reaches the previous figure of 3,000 tons per annum. As, however, there is scope for a further reduction in the prices of sheets and stampings, it is hoped that both Tata Iron and Steel Co., Ltd., and Sankey's Electrical Stampings Ltd., will take concerted action to effect such a reduction. [Paragraph 8(b) (1—5)].

(6) In order to encourage the indigenous production of electrical sheets and stampings and to place all indigenous manufacturers of electric motors on an equal footing as regards supply of raw materials, the present ban on imports of electrical sheets and stampings should be continued. Licences to import stampings from abroad should be granted only in exceptional cases where the required quantity and/or design cannot be manufactured locally. [Paragraph 8(b) (6)].

(7) It will be in the interest of the Indian industry for all local manufacturers to examine the possibility of standardising the size and design of laminations for each type of electric motor to be made. The standardisation of windings, shaftings and ball bearings should also be considered in consultation with the Indian Standards Institution. [Paragraph 8(b) (7)].

(8) The indigenous manufacturers should consider the desirability of reducing the quantity of iron castings used to the minimum necessary for the efficient functioning of the motors. They are also advised to explore the possibility of obtaining castings and copper conductors in the cheapest market. [Paragraphs 8(c) & (f)].

(9) In view of the large stocks of imported motors and the fact that the indigenous industry can meet the entire requirements of the country in respect of motors of 1 to 15 h.p., imports of motors upto 15 h.p. should be restricted until the present stocks are disposed of. [Paragraph 9(c)].

(10) The lowest fair selling price of electric motors as estimated by the Board on the basis of production upto declared capacity in the case of the firms whose cost data have been examined are Rs. 243-3-3 for 3 h.p. (S.P. type), Rs. 281-9-5 for 5 h.p. (S.P. type) and Rs. 411-15-7 for 7.5 h.p. (T.E. type). [Paragraph 11].

(11) For the purpose of determining the quantum of protection necessary for the Indian industry, the cost of production of 3 h.p. screen protected type on the basis of maximum production has been taken as representative of the industry as a whole. [Paragraph 12].

(12) The Indian manufacturers should consider undertaking the manufacture of transformers, switch gear, pumping sets and similar articles, for which a portion of the same equipment and machinery as is required for electric motors can be utilised. [Paragraph 14(c)].

(13) Having regard to the fact that indigenous production is mostly confined to motors up to 15 h.p., for which there appears to be a regular demand, and the possibility of imported motors of 15 to 20 h.p. offering a competition to indigenous motors of 15 h.p., we recommend that the existing protective duty on motors of 1 to 20 h.p. should be raised from 10 per cent. to 15 per cent. *ad valorem*. Motors of h.p. above 20 should be removed from the protected category. [Paragraph 14(e)].

(14) Several manufacturers are engaged in the production of fractional h.p. motors. In order to encourage the manufacture of fractional motors in the country, the same protective duty should be levied on such motors as has been recommended in respect of motors of 1 to 20 h.p., i.e., 15 per cent. *ad valorem*. [Paragraph 15].

(15) Component parts such as are specially designed for the manufacture of motors of a h.p. not exceeding 20 and have been given a special shape or size for the purpose should also be protected and a duty of 15 per cent. *ad valorem* levied on them.

(16) There is no need to extend protection to control gears of electric motors. [Paragraph 17].

(17) The existing item 72(14) of the First Schedule to the Indian Customs Tariff should be amended as shown in paragraph 18.

(18) The revised measure of protection recommended in respect of motors up to 20 h.p. should be continued for a period of three years beginning from 1st April, 1950. [Paragraph 19].

(19) Detailed information regarding the value and number of imported electric motors of the types specified in paragraph 20 should be collected and published in the Accounts Relating to the Sea-Borne Trade and Navigation of India. [Paragraph 20].

23. **Acknowledgments**.—The Board wishes to acknowledge the assistance it has received in the course of this inquiry from Dr. P. K. Kapre, Deputy Development Officer, Directorate-General of Industries and Supplies. Our thanks are also due to Mr. R. Sundaram, Cost Accounts Officer, for his examination of the cost data of the two Indian manufacturers of electric motors.

G. L. MEHTA—PRESIDENT.

B. V. NARAYANASWAMY—MEMBER.

M. E. RAHMAN—MEMBER.

R. DORAI SWAMY—SECRETARY.

Ramday, the 30th September, 1949

APPENDIX I-A

(Vide paragraph 7(a).)

Comparative statement showing the declared installed capacity and the actual production in respect of motors of 1 to 80 horse power during the period 1947-49.

Name and location of the factory.	Date of commencement of production	Annual declared capacity (No. of Motors)	Actual Annual Production 1 to 30 HP						Remarks.
			1947	Total H.P.	No. of motors	1948	Total H.P.	No. of motors	
1. Kirloskar Bros. Ltd., Kirloskarwadi	Oct. 1948	4,000	930	4,757	752	4,208	43 (a)	424	(a) Till end of Feb.
2. Kirloskar Electric Co. Ltd., Bangalore.		9,000	4,078	17,810	7,032	29,977.5	..	..	(b) Till end of July.
3. Crompton Parkinson (Works) Ltd., Bombay.	..	4,000	860	4,116	1,602	10,328.5	..	..	..
4. Associated Electrical Industries Institute Mfg. Co. Ltd., Calcutta.	..	1,929	761	4,020.5	835	4,525	271 (c)	1,489.5	(c) Till end of April.
5. P. S. G. & Sons Charity Industrial Institute, Polambedu Coimbatore.	Oct. 1941	1,200	320	1,970	353	1,891.5	..	..	..
6. Argus Engineering Co. Ltd. Poolkamedu, Coimbatore.	1947	2,400	848 (d)	2,129.5	968	3,073	..	..	(d) From April.
7. Bharat Bili Ltd. B'by.	April, 1947	9,700	..	268	645.5	652 (e)	963.5	..	(e) Till end of March.
8. National Electrical Industries Ltd., B'by.	Nov. 1948	3,000	136	146	448	547	..	..	..
9. Electric Construction and Equip- ment Co. Ltd., Calcutta.	End, 1948	360	64	320	84	391	41 (f)	218	(f) Till May.
10. Eastern Electrical Co. Silgalsalur, Coimbatore.	June, 1947	3,000	..	..	355	1,274	92 (g)	414	(g) In April only.
11. Jyoti Ltd. Baroda	Jan. 1948	2,200	..	..	..	..	..	..	..
12. General Electrical Co. of India Ltd., Calcutta.	April, 1949	(26,000HP) (h)	..	..	..	..	..	..	(h) Production stop- ped due to O.G.L.
13. British India Electrical Construction Co. Ltd., Calcutta.	..	6,000	..	..	..	..	..	..	(i) At the rate of 6 H.P. per motor the total declared capa- city 2,63,400 H.P.
14. Mysore Government Electric Fac- tory, Bangalore.	1949	46,680	7,616	35,269	12,780	57,023.5	1,724	7,453.5	

motor + 20,000 H.P. (i)

APPENDIX I-B

(Vide paragraph 16).

Statement showing the Indian industry's capacity and actual production in respect of fractional h.p. motors for the period 1947-1949.

Name and location of the factory.	Date of commencement of production.	Declared annual capacity.	Actual production of fractional H.P. motor (i.e. below 1 H.P.)				Remarks
			1947	1948	1949	No. of motors	
1. Crompton Parkinson (Works) Ltd. Haines Road, Worli, Bombay.	..	361	210	417	249	..	..
2. National Electrical Industries, Parel, Bombay.	..	..	..	..	..	50 (a)	(a) End of March.
3. Electric Construction and Equipment Co. Ltd., Calcutta 12.	..	126	68.5	237	130.75	..	..
4. Bharat Bijlee Ltd., Kings Circle, Bombay.	..	..	..	26	18.75	..	..
5. Polar Electrical Eng. Co. Ltd., Behala (W. Bengal).	October, 1948	3,000	150	75	700	350	25 (b)
6. 'GB' Works Ltd., Mahesht, Rishra, (W. Bengal).	Jan., 1949	2,400	..	..	..	108 (e)	32 (c) 3 months prediction.
7. Machinery and Industries (India) Ltd.—Burashibitala Chinsurah (W. Bengal).	Feb., 1948	500	..	..	100	50 (d)	25 (d) Till May (H.P. calculated at the rate of 1 per motor).
8. Metropole Works, Verka, Amritsar	1934	1,200	84	42	53	26.5 (e)	6.5 (e) Till April.
9. G.T.R. Company Ltd., Calcutta ..	..	2,400	..	..	..	..	(f) Production stopped due to O.G.L.
			721	401.5	1,632	825	247 113.5

Notes. (5) to (9) manufacture exclusively fractional H. P. motors.

APPENDIX II
(Vide paragraph 6).

Statement showing the actual production in 1948 of electric motors of different horse powers.

	H. P.						No. of motors produced	No. of horse power
below	1		
1	1,532	825
1	1,849	1,849
1.5	645	967.5
2	1,728	3,456
2.5	27	67.5
3	2,523	7,569
3.5	3	10.5
4	276	1,104
4.5	1	4.5
5	2,832	14,160
6	171	1,026
7.5	1,435	10,762.5
8	24	192
9	2	18
10	727	7,270
12	10	120
12.5	149	1,862.5
15	271	4,065
20	32	640
25	74	1,850
30	1	30
GRAND TOTAL							14,312	57,849

APPENDIX III

[Vide Paragraph 8(a)].

Comparative statement showing the prices at which raw materials are obtained by the several manufacturers of electric motors.

No.	Raw Materials	Quantity (Unit)	According to CAO's cost report for Kirloskars in 1947	Bharat Bijlee 1949	National Electrical Industries 1949	Crompton Parkinsons 1948	Associated Electrical Industries 1948	E. C. E. C. Calcutta 1948	G. B. Works West Bengal 1948
1	Electrical St--1) sheets or stampings	Cwt.	30 0 0 (Sheets)	62 8 0 (Sheets)	152 0 0 (Sheets)	152 0 0 (Stampings)	178 0 0 (Stampings)	109 12 0 (Stampings)	185 0 0 (Stampings)
2	Enamelled copper wire 21 SWG to 30 SWG.	Lb.	2 5 0	3 0 0 to 4 8 0	3 0 0 (Ind)	3 0 0 (Ind)	2 7 0 to 3 3 9	2 6 5 (Imp)	2 7 to 3 8 0 (Imp)
3	D.C.C. Copper wire 15 S.W.G. to 21 S.W.G.	Lb.	14 0 0	49 0 0	56 0 0	76 7 0	51 0 0 (Ind)	28 0 0 (Ind)	2 9 0 to 3 4 9 (Imp)
4	Grey Iron casting	..	Cwt.	..	..	..	..	..	..
5	Bolts and Nuts	..	Lb.	..	1 0 0 (Ind)	..	0 8 0 to 1 0 0 (Ind)	..	1 0 0 (Imp)

6	Bal bearing ³	..	Each	8 2 0	4 14 0	5 15 0	5 5 0	..	8 0 0	4 4 0	4 1 0
					14 3 0	9 7 0	6 12 0		7 3 2	8 8 0	4 14 0
					(Imp)				(Imp)		
7	Bright shafting 1"	..	Cwt.	..	22 0 0	..	..	..	..	63 10 0	..
					(Ind)				(Imp)		
8	Leatheroid	..	Lb.	..	4 8 0	..	..	4 2 0	..	4 0 0	5 8 0
					(Imp)			(Ind)		(Imp)	(Ind)
9	Copper conductors	..	Lb.	0 15 0	..	2 0 0	2 10 0	..	..	..	..
10	M. S. Parts	..	Lbs.	0 5 0	..	0 3 0	0 2 6	..	..	..	..
11	Cotton Tape	..	Gross Yards	6 4 0	..	4 8 0	7 0 0	..	..	..	..
12	Thinner	..	Gallons	Not record- ed	..	10 0 0	10 0 0	..	..	..	..
13	Insulating varnish	..	Gallons	Do.	..	20 0 0	24 11 0	..	..	24 0 0 (Eng.) 17 8 0 (Ind.)	..

The firm say that they have recently imported stampings at the rate of Rs. 143 4-0 per cwt. landed cost.

APPENDIX IV

(Vide Paragraph 12).

Statement showing the break-up of landed costs into c.i.f., customs duty & clearing charges of electric motors squirrel cage, induction motors—440 volts.

4 Poles 50 Cycles & 1440 or near about RPMs, screen protected.

Serial No. 1	Source of information. 2	Origin of Import. 3	Date of Import. 4	Type and specification. 5	C. I. F. 6	Customs duty 7	Clearing charges 8	Landed costs 9	Selling price 10	Remarks 11
3 H.P. 1	Volkart Brothers Bombay ..	Switzerland	Nov. 48	Drip proof Brown-Bovari Make. Me 34.s. 141.5 RPM.	241 0 0	24 0 0	1 13 0	256 13 0	320 0 0	Rs. A. P.
2	A.C.E.C. (India) Ltd. Bombay ..	Belgium	24-9-48	AV. 1544 1500 RPM.	206 1 0	20 10 0	1 8 0	228 3 0	276 8 0	
3	English Electric Co. Ltd. Bombay ..	U. K.	1949	1600 RPMs.	208 0 0	21 6 5	5 3 2	234 9 7	275 8 0	
4	G.E.C. (India) Ltd. Calcutta ..	U. K.	1949	Do.	208 0 0	21 6 5	5 3 2	234 9 7	275 8 0	
5	Collector of Customs, Bombay ..	U. K.	20-1-49	Newman	220 0 0	..	..	..	305 0 0	
6	Collector of Customs, Madras ..	..	1949	1450 RPMs.	231 0 0	..	..	..	..
5 H.P. 1	Volkart Bros. Bombay ..	Switzerland	Nov. 1948	Drip proof Sg. cage induction, Brown Bovari make MC 44. 125 RPMs.	288 10 0	28 12 0	1 10 0	319 0 0	385 0 0	
2	English Electric Co. Ltd. ..	U. K.	1949	1500 RPM.	263 0 0	27 0 0	6 9 7	296 9 7	349 0 0	
3	G. E. C. of India Ltd., Calcutta ..	U. K.	1949	Do.	263 0 0	27 0 0	6 9 7	296 9 7	349 0 0	
4	Ashok Eng. Co., Bombay ..	U. K.	28-4-49	1450 RPM Newman	256 0 0	..	..	..	..
5	Collector of Customs, Bombay ..	U. K.	20-1-49	Do.	256 0 0	..	..	..	..
6	Collector of Customs, Madras ..	..	1949	..	293 0 0	..	..	..	..
7.5 H.P. 1	Volkart Bros. Bombay ..	Switzerland	Nov. 1948	Drip proof Brown Bovari Make. Me. 42, 2850 RPM.	309 0 0	30 15 0	1 9 0	341 8 0	410 0 0	
2	Ashok Eng. Co., Bombay ..	U. K.	28-4-49	Newman 1450 RPM	350 0 0	..	..	..	..
3	Collector of Customs, Bombay ..	N. Ireland	1-6-49	1450 RPM	344 0 0	..	..	..	..
4	Collector of Customs, Madras ..	Germany	18-10-48	A.E.C.	345 0 0	..	..	..	..
		U.K.	1949	1450 RPM	359 0 0	..	..	..	..
		..	1949	..	368 0 0	..	..	..	..

APPENDIX V

(Vice Paragraph 21 (f)).

Statement furnished by National Electrical Industries Ltd., Bombay showing reduction in manufacturing cost, if import duty on raw materials were reduced from the existing levels to 5 per cent.

(Basis : Electric Motors 3HP|1440 RPM Screen Protected).

No.	Material	Quantity	Present duty %	On present duty.			On 5% duty.			Effective saving		
				Landed cost Rs.	% of total material cost.	% of total manufacturing cost.	Landed cost	Reduction in rupees Rs.	Reduction %	Rupees	% of total material cost	% of total manufacturing cost
1	Insulated Winding Wire (Nylon, Silk rayon covered).	118 lbs.	30	34 2 0	18.62	12.36	27 9 0	6 9 0	19.23			
2	Prespan Leatheroid Bakelised Paper etc.	10 oz.	30	3 15 2	2.15	1.42	3 2 11	0 12 3	19.23			
3	Bearings ..	2 Nos.	10	12 1 0	6.58	4.37	11 8 2	0 8 10	4.56			
4	Insulating Varnish and tinner.	3 pints	30	7 4 6	3.98	2.67	5 14 2	1 6 4	19.23			
5	Silicon steel laminations.	30 lbs. 13 ozs.	18	52 9 2	28.67	19.04	47 3 8	5 5 6	10.18			
6	Other materials indigenous and not subject to duty.	73 5 2	40.00	26.56	73 5 2			
				183 5 0	100.00		66.42	168 11 1	14 9 11	..		



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